



Public Health & Environmental
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Pollution Control Division

Ozone Alerts in the Houston/Harris County Area

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Air Sampling Coordinator
Harris County Pollution Control

What is Tropospheric Ozone and Why do we care?

- Ground level ozone
- Decreased pulmonary function
- Pulmonary deficient especially susceptible
- Children and elderly at higher risk
- Described as “sunburn” of the lungs



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Why do we need ozone alerts in Houston/Harris County?

The eight-county area is

SEVERE

Non-attainment for ozone



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2003 Ozone Exceedance Days

1-hour exceedances

=====

■ Orange	24
■ Red	10
■ Purple	1

■ Total	35
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8-hour exceedances

=====

■ Orange	22
■ Red	18
■ Purple	4

■ Total	44
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	ONE-HOUR OZONE EXCEEDANCE DAYS in H-G-B REGION																	
	(all monitor sites)															total	most	Los
															total	unique	days at	Angeles
															days	hours	one site	AQMD
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			=====	=====	=====	=====
2000	0	1	0	3	2	1	9	15	9	4	0	0	=	44	164	16	40	
2001	0	0	1	1	2	9	4	6	4	3	2	0	=	32	93	10	36	
2002	1	0	1	2	0	6	3	5	6	2	0	0	=	26	71	5	49	
2003	0	0	2	3	5	3	5	6	7	4	0	0	=	35	132	10	68	
2004	0												=	0	0	0	0	
Ave =	0	0	1	2	2	5	5	8	7	3	1	0			16-Feb	2004		

Current outdoor Ozone level in parts per billion

0-79 Good	Little to no risk involved today
80-124 Moderate	Moderate health concern for sensitive people
125-164 Unhealthy for Sensitive	Sensitive health groups may experience respiratory effects
165-204 Unhealthy v	Everyone may experience health effects
Over 205 Very Unhealthy	Everyone may experience serious health effects



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AQI and 8hr - 1hr Ozone Alert Comparison

AQI

8-hr

1-hr

Green	01--50 Healthy	01- 64	----
Yellow	51-100 Moderate	65- 84	---
		(trigger) in ppb	
Orange	101-150 Sensitive	85-104	125-164
Red	151-200 Unhealthy	105-124	165-204
Purple	201-300 Very Unhealthy	125-300	205-404
Maroon	300-500 Hazardous	301 - +	405-604



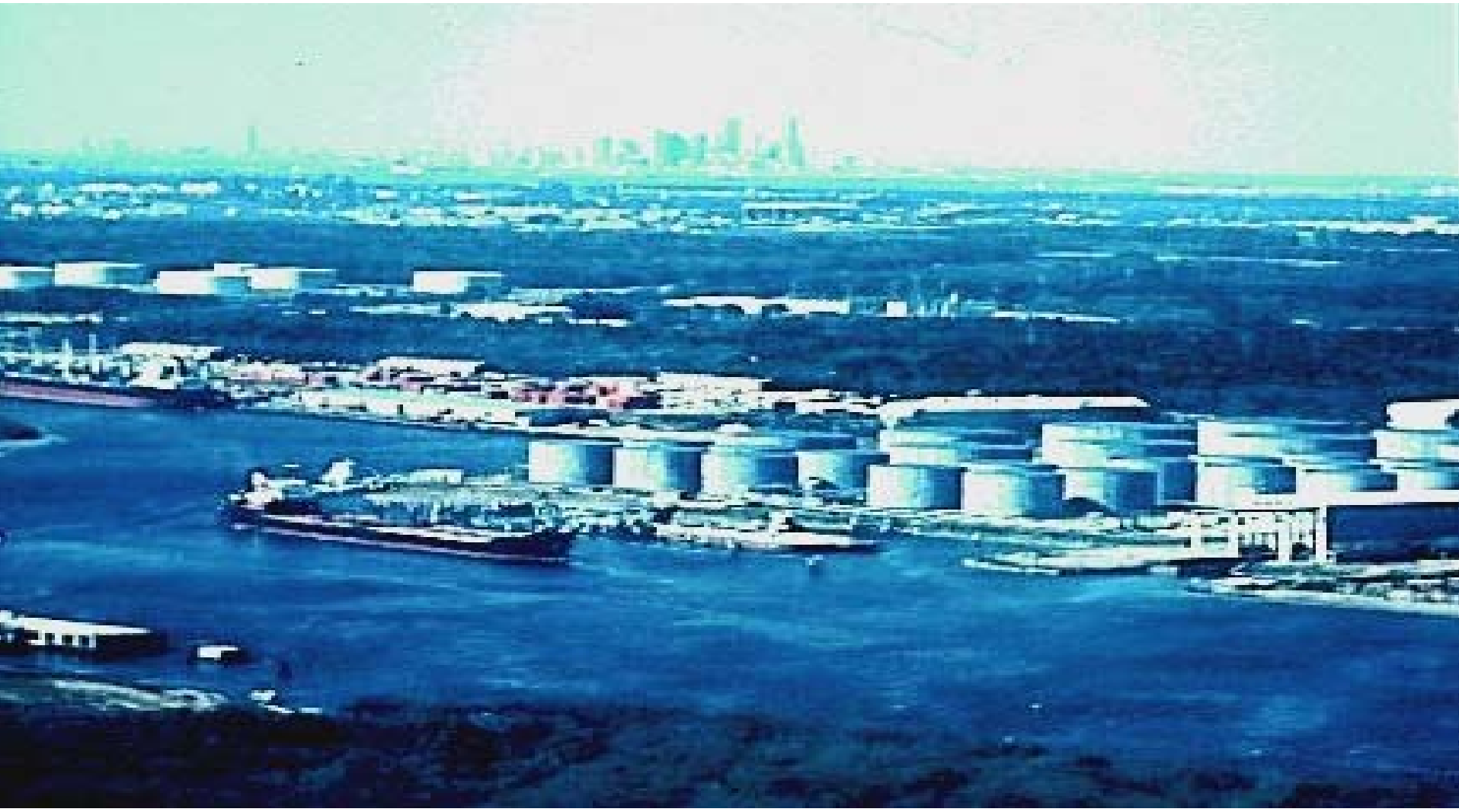
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Houston/Harris County Area

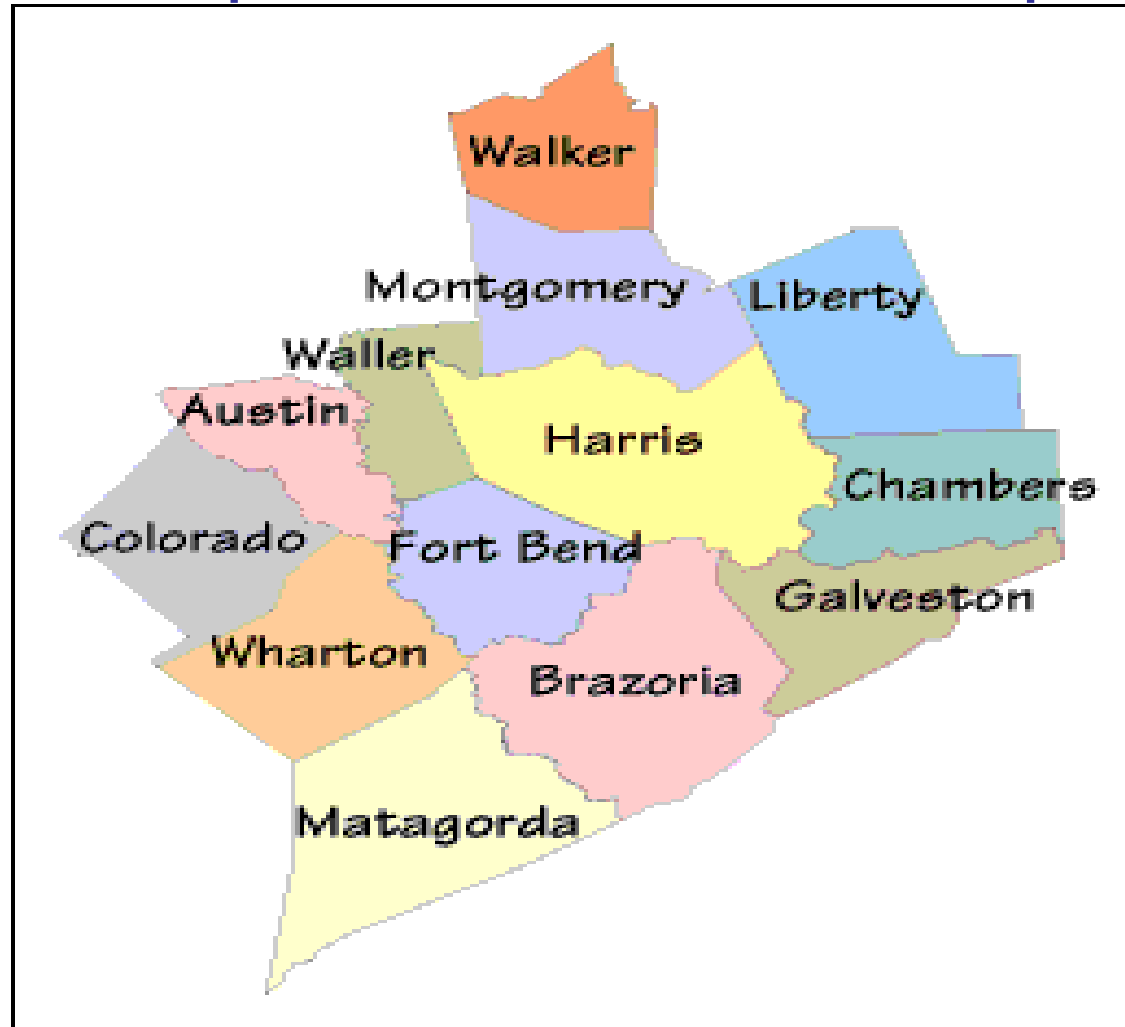
- Unique meteorology – coastal
- Unique geography – large flat coastal
- Unique demographics – 5 ¼ million
- Unique chemistry – petrochemicals

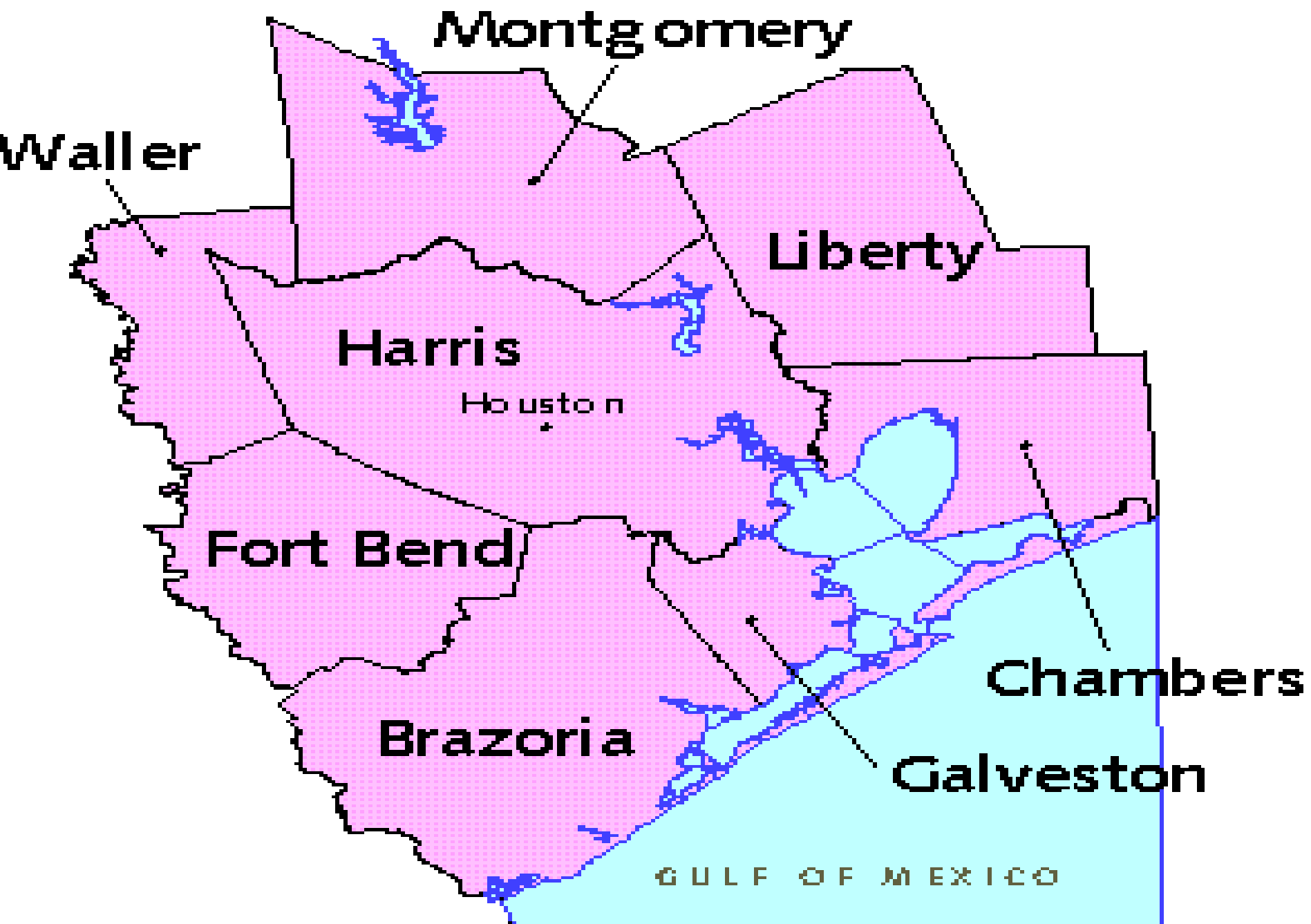
Houston Ship Channel Petro-chemical Industry



Houston Transportation Area

12,500 sq miles – 5 ¼ million people







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Mitigation of Health Impacts

Elderly

Children

Respiratory diseases



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Mitigation of Ozone Precursors

- Industrial activities
- Vehicular travel
- Fueling times



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How to communicate ozone exceedances to the public

- Email notifications from TCEQ
- Refined emails from HCOEM
- Press releases for red and purple alerts
- Highway electronic signs
- Monitor reading displays
- Phone advisories to ISDs



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Harris County Public Health Ozone Monitoring Network

- Established 2002
- SEP funding
- Existing Public Sites
- \$15,000 - \$20,000 per Site
- Currently 6 sites operating
- 7 more in development



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Ozone Monitor Reporting Logistics

- Site selection
- Monitors – EPA equivalent method
- Data loggers – TCEQ network OK
- Phone modem / standing IP address
- Coordination of installation
- QA/QC program





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How to give Public access to data generated?

- Internet search
- Email alert system
- Monitor remote digital displays
- Press releases



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Air Quality Health Advisory

Air Quality in Harris County
(Reaches/May Reach)

Level Red



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Air Quality Warning/Health Advisory

Air Quality in Harris County
Reaches Level Red with the
Possibility of Reaching Level
Purple



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Ozone Forecasts and Warnings E-mail Alerts

- TCEQ –

http://www.tceq.state.tx/cgi-bin/monops/select_curlev?region12_cur.gif

- Harris County Office of Emergency
Management

<http://ozone.hcoem.org>

Click "Subscribe to Ozone Alerts"

How do you choose the monitors you want to receive ozone exceedance reports on?

<http://ozone.hcoem.org>

Harris County OEM "Home of the Real-Time Rainfall Maps" - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <http://www.hcoem.org/> Go Links

Google Search Web PageRank 586 blocked AutoFill Options

ABOUT HC-OEM

- Basio Plan
- Contact Us
- Director of OEM
- Judge Robert Eckels
- FAQ
- Flood Alert System
- Harris County's Role
- Helpful Numbers
- [Mission Statement](#)

CHEMICAL INCIDENTS

- Hazardous Materials
- Local Emergency Planning

CURRENT WEATHER

- EMWIN Houston*
- Intellicast Houston Radar*
- KHOU Channel 11*
- KTRK Channel 13*
- News 24 Houston*
- KPRC Channel 2*
- NWS Houston/Galveston*
- Weather Channel*

OZONE ALERTS

- [Subscribe to Ozone Alerts](#)
- [Check Ozone Alerts](#)

PLAN & PREPARE

- Evacuation Routes
- If Disaster Strikes
- Humane Society USA
- Tips for Animals*

RELATED LINKS

- 740AM KTRH News Radio
- Houston Real-Time Traffic*
- Our OEM Neighbors
- Notification Links


STORM INFO

- Hurricanes
- La Nina*
- Lightning & T-Storms
- Tornadoes

*Indicates External Link

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READY.GOV
From The U.S. Department of Homeland Security

"Terrorism: Preparing for the Unexpected"

Houston JTTF Hot Line 713-693-5000


[Click Here to Draw Historical Rainfall Maps](#)

View Road Gauge Map **Harris County Citizen Corps**


Draw Rainfall Map for the Last:

Note: Counts back in time from the current time.

Note: You must have at least Internet Explorer 4.0 or above or Netscape Navigator 4.6 or above to view the rainfall maps.

 **AMBER ALERT**

SITUATION REPORT
USED TO REPORT INFO. DURING OEM ACTIVATION



<http://www.hcoem.org/mission.htm> Internet

Start | Inbox - Microsoft Outl... | Harris County OEM... | OEM.doc - Microsoft... | Microsoft PowerPoint... | 4:59 PM

How do you choose the monitors you want to receive exceedance reports on?

<http://ozone.hcoem.org>

Please choose a station to subscribe to ozone warnings for that station - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print

Address <http://ozone.hcoem.org/> Go Links

Google Search Web PageRank 586 blocked AutoFill Options

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Step 1:

☐ Check this box to receive **Ozone Watches**
Ozone Watches are issued when meteorology in the region is predicted to be favorable for high levels of ozone.

Step 2:


☐ Check this box to receive **Ozone Warnings** for all monitors
Ozone Warnings are issued when any monitor exceeds the health standard for ozone.

or

Choose from the drop down boxes below the ozone monitors you wish to receive Ozone Warnings from. See the map below for site locations. We recommend you select the 2 or 3 monitors nearest your location, since occasionally single monitors go off-line.

Monitor 1 Monitor 2 Monitor 3

Step 3:

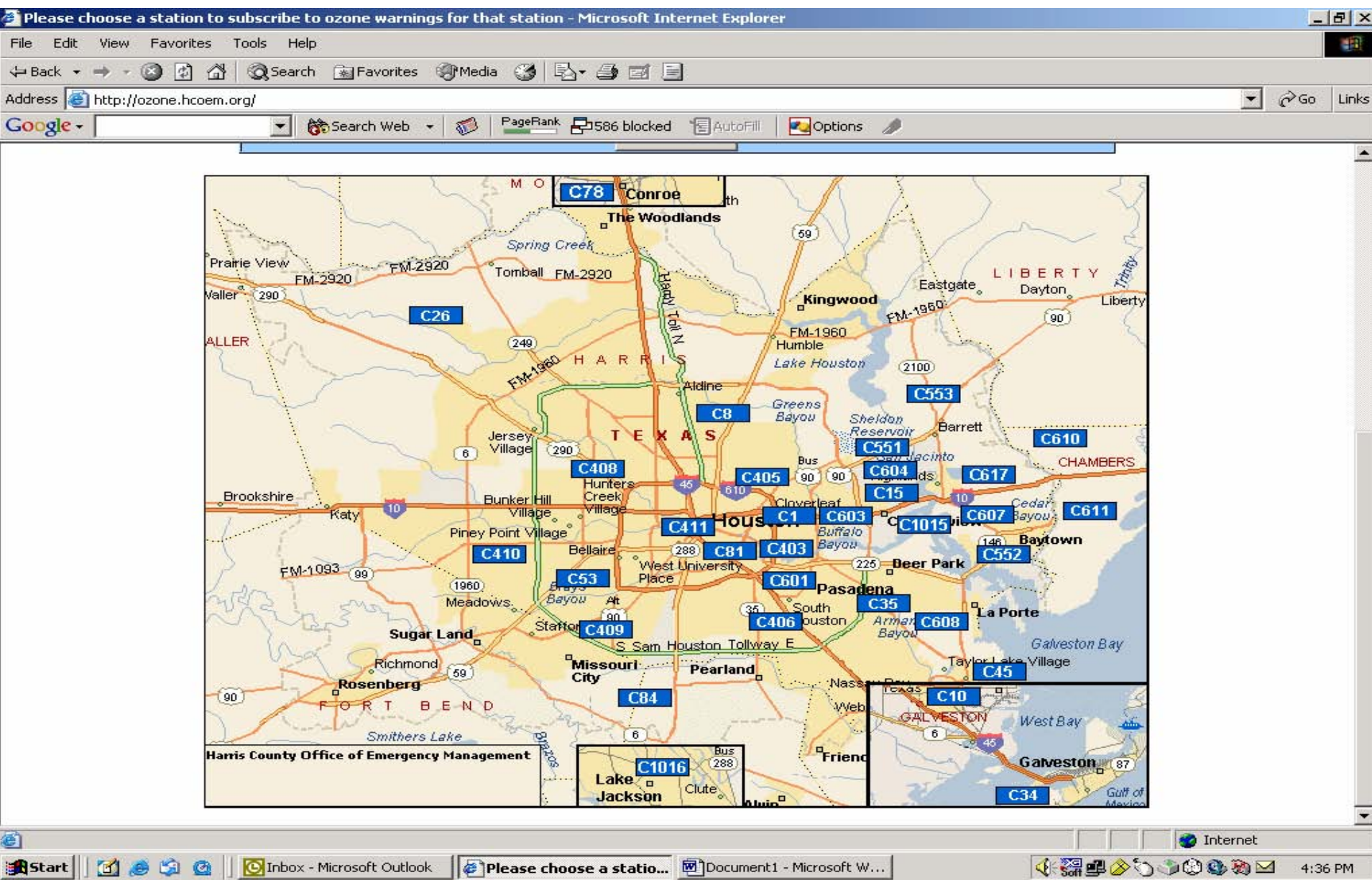


Done Internet

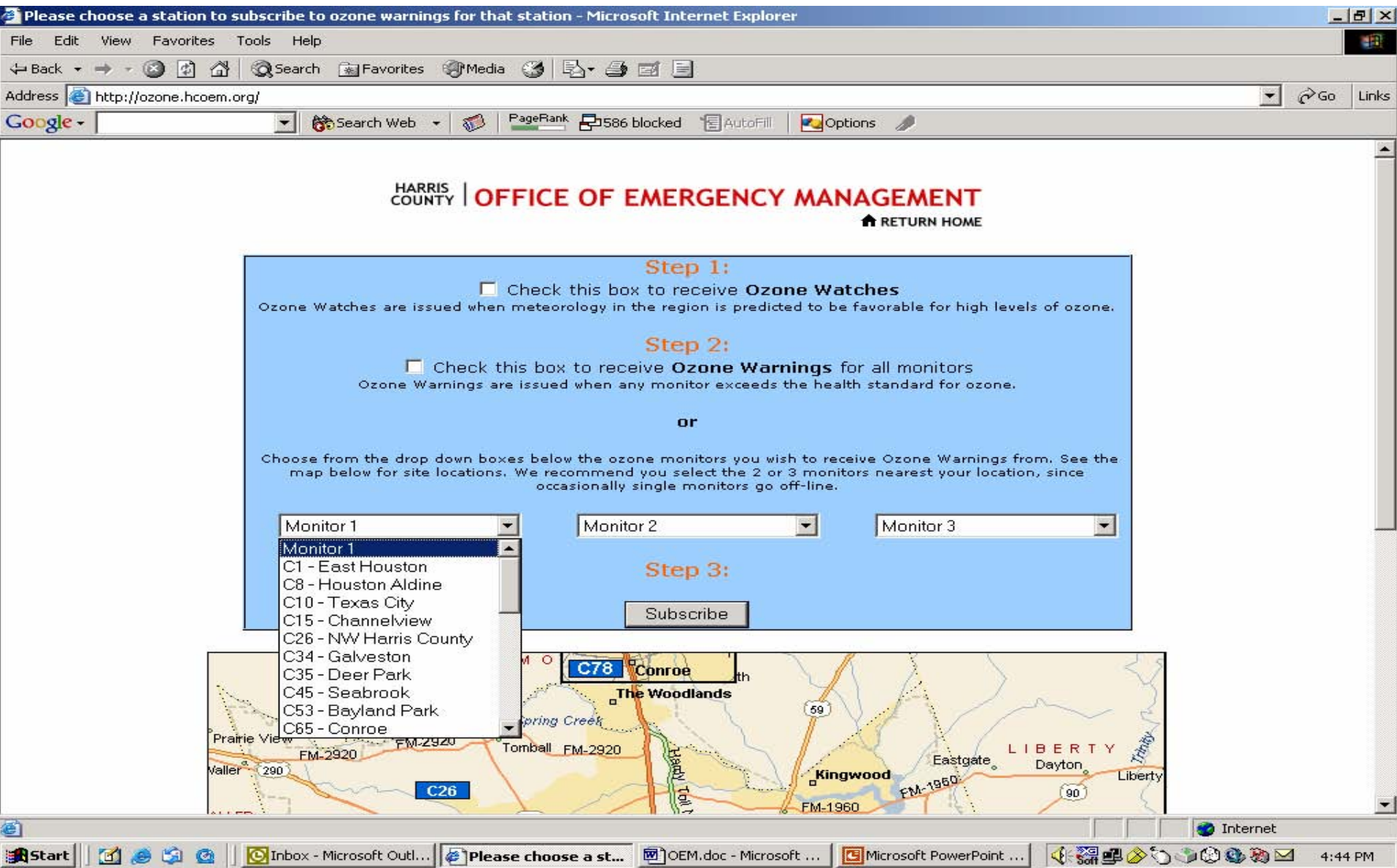
Start Inbox - Microsoft Outlook Please choose a station...

4:36 PM

Identify the monitors of interest to you:
<http://ozone.hcoem.org>



<http://ozone.hcoem.org>





Air Quality Reference Guide for the Houston-Galveston Area

www.hgac.cog.tx.us/transportation



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More information

- Texas Commission On Environmental Quality: www.tceq.state.tx.us
- Houston-Galveston Area Council:
www.hgac.cog.tx.us
- Harris County Pollution Control
www.hd.co.harris.tx.us/pcd/pcd.htm:
- Jerry Harris-Air Sampling Coordinator
(713) 920-2831